

Grocery Store Sales Analysis

 Scenario:

 Grocery Store Sales Analysis – Beginner-Friendly Data Analytics Project

◆ PHASE 1: Understand the Goal

Problem Statement

A small grocery store owner wanted to understand the store's sales performance for May 2025.

The goal was to explore:

- Which products sell the most
- Which categories generate the highest revenue
- What payment methods are most preferred by customers
- Which days see the most customer activity

This analysis is intended to support better decisions on inventory, staffing, and customer engagement.

Objective:

- Identify best-selling products
- Understand customer behaviour
- Track revenue trends
- Build a visual report

◆ PHASE 2: Prepare the Dataset

Step 1: Create (or collect) sample data

◆ PHASE 3: Excel – Data Cleaning + Basic Analysis

Step 2: Clean the Data

- Check for missing values or blanks
- Ensure consistent spelling (e.g., “UPI” not “upi”)
- Correct any wrong formats (e.g., dates as Date format, prices as Number)

Step 3: Add Formulas (if needed)

- Total Sale = Quantity × Unit Price
- Add columns if you want:
 - Weekday (to analyse daily patterns)
 - Profit (if you know cost price)

◆ PHASE 4: Excel or Power BI – Analyse the Data

Step 4: Basic Analysis in Excel

Use Pivot Tables to answer:

- What are the top 5 best-selling products?
- Which category earns the most revenue?
- What's the most common payment method?
- Which days are the busiest?

You can use:

- COUNT, SUM, AVERAGE functions
- FILTER and SORT to explore the data
- CHARTS (bar, pie, line) to visualize

OR

Step 5: Import to Power BI

- Load your Excel file into Power BI
- Create visuals like:
 - Bar chart: Sales by Category
 - Line chart: Daily revenue
 - Pie chart: Payment methods
 - Table: Top 10 products by quantity sold

◆ PHASE 5: Build a Dashboard

Step 6: Design a Simple Dashboard (Power BI)

- Give it a title (e.g., "Uncle's Grocery Sales Report – May 2025")
- Arrange your visuals clearly
- Add filters (e.g., by Product, Date, Payment Method)

◆ PHASE 6: Wrap Up & Present

Step 7: Summary & Insights

Write a brief summary (can be a slide or Word doc):

- What are your key findings?
- What can uncle improve? (e.g., stock more dairy, offer discounts to returning customers, etc.)

Step 8: Save Everything

- Save your Excel cleaned file
 - Export Power BI dashboard (PDF or link)
 - Save your insights as a document
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Solutions:

EXCEL: Data Cleaning + Basic Analysis

1. Total Sale = Quantity * Unit Price
2. Extract Weekdays = Text(A2,"dddd')
3. Sum Total sales by product(using SUMIF)
If you want total sales for "Bread" only.
Consider, Product is Column B and Total Sale is F.
Then,
= SUMIF(B:B, "Bread", F:F)
4. Count how many sales transactions per payment method (COUNTIF)

Count how many UPI payments in column G:

=COUNTIF(G:G, "UPI")
5. Calculate average sale amount (AVERAGE)

Average of Total Sale column (F):

=AVERAGE(F:F)
6. IF to label high-value sales

Mark sales above 100 as "High" else "Low"

If Total Sale in F2:

=IF(F2>100, "High", "Low")

Method 1: Analyse the Data using Excel

Use Pivot Tables to answer:

- What are the top 5 best-selling products?
- Which category earns the most revenue?
- What's the most common payment method?
- Which days are the busiest?

1. What are the top 5 best-selling products?

Drag **Product** -> **Rows**

Drag **Quantity** -> **Values**

Note: Make sure it says **Sum of Quantity**

Right-click any number -> **Sort** -> **Largest to Smallest**

Top 5 = first five rows

Row Labels	Sum of Quantity
Biscuits	19
Noodles	17
Bread	17
Eggs	16
Rice	11
Milk	8
Sugar	7
Oil	6
Grand Total	101

2. Which category earns the most revenue?

Drag **Category** -> **Rows**

Drag **Total Sale** -> **Values**

Make sure it says **Sum of Total Sale**

Sort from **Largest to Smallest**

Row Labels	Sum of Total Sale
Dairy	1360
Essentials	965
Snacks	530
Bakery	510
Grains	440
(blank)	105.6944444
Grand Total	3910.694444

That top row? That's the cash cow 🐮💰

3.What's the most common payment method?

Drag **Payment Method** → **Rows**

Drag **Payment Method** **again** → **Values**

It will **auto count** the number of times each appears

Excel will show **Count of Payment Method**

Row Labels	Count of Payment Method
Cash	16
UPI	20
(blank)	
Grand Total	36

4.Which days are the busiest?

Drag **Weekday** → **Rows**

Drag **Total Sale** → **Values** (to analyse revenue)

OR

Drag **Weekday** → **Rows**

Drag **Weekday** **again** → **Values** → shows Count = number of sales per day

Sort **descending** to find the busiest day!

Row Labels	Sum of Total Sale	Count of Weekday
Monday	705	6
Thursday	520	6
Saturday	565	6
Friday	420	5
Sunday	500	5
Tuesday	480	4
Wednesday	615	4
Grand Total	3805	36

Method 2: Analyse the Data **using Power BI**

Load Excel into Power BI

1. Open Power BI Desktop
2. Click Home → Excel Workbook
3. Select your cleaned Excel file
4. Choose the correct sheet (where your data lives) → Click Load

Create These Visuals

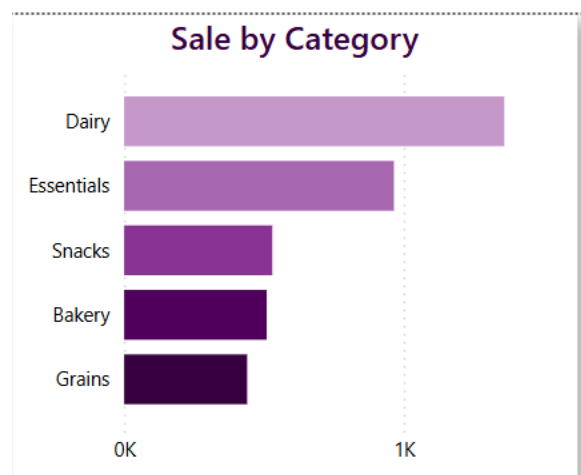
- ◆ Bar Chart – Sales by Category

Go to Visualizations → Select Clustered Bar Chart

X-Axis: Category

Y-Axis: Total Sale

(Optional: Add Data Labels from Format panel)



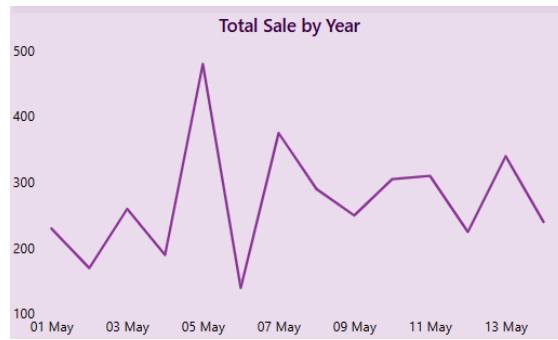
◆ Line Chart – Daily Revenue

Visual: Line Chart

X-Axis: Date

Y-Axis: Total Sale

This shows how revenue changes day-by-day



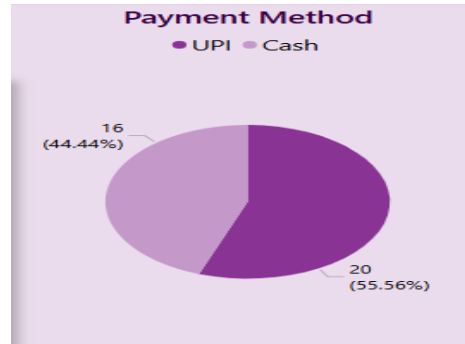
◆ Pie Chart – Payment Methods Used

Visual: Pie Chart

Legend: Payment Method

Values: Count of Payment Method

(Just drag Payment Method into Values and set to Count)



◆ Table – Top 10 Products by Quantity

Visual: Table

Fields: Product, Quantity

Click dropdown in the table → Sort descending by Quantity

Add a filter to show Top 10 only

Product	Sum of Quantity
Oil	6
Sugar	7
Milk	8
Rice	11
Eggs	16
Bread	17
Noodles	17
Biscuits	19
Total	101

Build Your Dashboard

✔ Step 6: Design a Simple Dashboard

🎯 Title :

“Grocery Sales Report – May 2025”

(Add a Text Box from the Insert tab)

🎯 Arrange your visuals:

Insert → Slicer

Add: Product, Date, Payment Method

